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* * * * * * * * * * * * * * STN
                                Columbus
FILE 'HOME' ENTERED AT 09:29:24 ON 10 JUN 2007
=> file biosis medline caplus wpids uspatfull
COST IN U.S. DOLLARS
                                                  SINCE FILE
                                                                  TOTAL
                                                       ENTRY
                                                                SESSION
FULL ESTIMATED COST
                                                        1.47
                                                                   1.47
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FILE 'CAPLUS' ENTERED AT 09:33:39 ON 10 JUN 2007
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FILE 'USPATFULL' ENTERED AT 09:33:39 ON 10 JUN 2007
CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)
*** YOU HAVE NEW MAIL ***
=> s polymerase chain reaction and sequencing
        114221 POLYMERASE CHAIN REACTION AND SEQUENCING
=> s ll and nucleotide(4a) label
           833 L1 AND NUCLEOTIDE (4A) LABEL
=> s 12 and free (2a) 3 (2a) hydroxyl
L3
            30 L2 AND FREE (2A) 3 (2A) HYDROXYL
=> dup rem 13
PROCESSING COMPLETED FOR L3
             30 DUP REM L3 (0 DUPLICATES REMOVED)
=> s 14 and (support or substrate)
            28 L4 AND (SUPPORT OR SUBSTRATE)
=> d 15 bib abs 1-28
L5
     ANSWER 1 OF 28 USPATFULL on STN
ΑN
       2007:147528 USPATFULL
TI
      Method of preparing libraries of template polynucleotides
IN
       Gormley, Niall Anthony, Nr. Saffron Waldon, UNITED KINGDOM
       Smith, Geoffrey Paul, Nr. Saffron Waldon, UNITED KINGDOM
       Bentley, David, Nr. Saffron Waldon, UNITED KINGDOM
       Rigatti, Roberto, Nr. Saffron Waldon, UNITED KINGDOM
PΤ
       US 2007128624
                          A1 20070607
AΙ
       US 2006-486953
                          Α1
                              20060714 (11)
PRAI
       GB 2005-22310
                          20051101
DТ
       Utility
FS
      APPLICATION
LREP
      KLAUBER & JACKSON, 411 HACKENSACK AVENUE, HACKENSACK, NJ, 07601, US
CLMN
      Number of Claims: 29
ECL
       Exemplary Claim: 1
DRWN
       12 Drawing Page(s)
LN.CNT 2068
AB
       The present invention relates to a method for preparing a library of
```

template polynucleotides and use thereof in methods of solid-phase nucleic acid amplification. More specifically, the invention relates to a method for preparing a library of template polynucleotides that have common sequences at their 5' ends and at their 3' ends.

```
L5
     ANSWER 2 OF 28 USPATFULL on STN
ΑN
       2007:55807 USPATFULL
ΤI
       Mutant polymerases for sequencing and genotyping
ΙN
       Williams, John G.K., Lincoln, NE, UNITED STATES
       Anderson, Jon P., Lincoln, NE, UNITED STATES
       Urlacher, Teresa M., Wahoo, NE, UNITED STATES
       Steffens, David L., Lincoln, NE, UNITED STATES
PΑ
       LI-COR, INC., Lincoln, NE, UNITED STATES (U.S. corporation)
PΙ
       US 2007048748
                           A1 20070301
       US 2005-234677
AΙ
                           A1 20050923 (11)
       US 2004-626552P
PRAI
                           20041110 (60)
       US 2004-613560P
                           20040924 (60)
DT
       Utility
FS
       APPLICATION
       TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
LREP
       FLOOR, SAN FRANCISCO, CA, 94111-3834, US
       Number of Claims: 72
CLMN
ECL
       Exemplary Claim: 1
DRWN
       13 Drawing Page(s)
LN.CNT 1823
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to the discovery of novel mutant DNA polymerases
       that possess altered kinetics for incorporating phosphate-labeled
       nucleotides during polymerization. The invention further relates to the
       use of these mutant DNA polymerases in sequencing and
       genotyping methods.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 3 OF 28 USPATFULL on STN
       2006:281499 USPATFULL
ΑN
ΤI
       Modified polymerases for improved incorporation of nucleotide analogues
ΙN
       Smith, Geoffrey Paul, Essex, UNITED KINGDOM
       Bailey, David Mark Dunstan, Essex, UNITED KINGDOM
       Sanches, Raquel Maria, Essex, UNITED KINGDOM
       Swerdlow, Harold, Essex, UNITED KINGDOM
       Earnshaw, David James, Essex, UNITED KINGDOM
РΤ
       US 2006240439
                          A1 20061026
       US 2004-571706
ДΤ
                           A1
                               20040910 (10)
      WO 2004-GB3891
                               20040910
                               20060608 PCT 371 date
PRAI
      GB 2003-21306
                           20030911
DT
       Utility
FS
      APPLICATION
LREP
      KLAUBER & JACKSON, 411 HACKENSACK AVENUE, HACKENSACK, NJ, 07601, US
CLMN
       Number of Claims: 66
ECL
       Exemplary Claim: 1
DRWN
       2 Drawing Page(s)
LN.CNT 4088
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to modified polymerase enzymes which exhibit
       improved incorporation of nucleotide analogues bearing substituents at
       the 3' position of the sugar moiety that are larger in size than the
       naturally occurring 3' hydroxyl group. Also described are methods of
       using the polymerases to incorporate nucleotides into polynucleotides,
       particularly in the context of DNA sequencing.
```

L5ANSWER 4 OF 28 USPATFULL on STN ΑN 2006:46812 USPATFULL TIMethods of manipulating nucleic acids IN Xiang, Charlie, Germantown, MD, UNITED STATES Brownstein, Michael J., Rockville, MD, UNITED STATES The Gov. of the USA as represented by the Secretary of the Dept. of PA Health & Human Services (U.S. government) PΙ US 2006040283 A1 20060223 ΑI US 2005-104737 A1 20050411 (11) Continuation-in-part of Ser. No. WO 2003-US33319, filed on 10 Oct 2003, RLI PENDING Continuation of Ser. No. US 2002-269515, filed on 11 Oct 2002, PENDING Continuation-in-part of Ser. No. WO 2002-US11656, filed on 11 Apr 2002, PENDING US 2001-283423P 20010411 (60) DTUtility FS APPLICATION LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988, US CLMN Number of Claims: 46 ECL Exemplary Claim: 1 14 Drawing Page(s) DRWN LN.CNT 3952 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB Methods are provided for labeling nucleic acid molecules for use in hybridization reactions, and kits employing these methods. The level of labeling is increased by including one or more reactive modifications, such as amine-modifications, into the primers used to initiate synthesis of the nucleic acid molecule, for instance through random-primed reverse transcription. Also provided are modified random primers (such as amine-modified random primers) useful in these methods, labeling and hybridization kits comprising such primers, labeled nucleic acid molecules and mixtures of molecules, and methods for using them. Methods are also provided for amplifying a nucleic acid template contained within extremely small samples, in some cases as little as one cell. In particular embodiments, a single random primer is used for all steps of the amplification method. The nucleic acid template can either be of cellular or viral origin. The disclosure also provides an improved method of fixing cells, tissue sections, or laser microdissected sections from which RNA can be obtained for subsequent use as RNA templates or for generating labeled probe. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L5 ANSWER 5 OF 28 USPATFULL on STN ΑN 2005:298944 USPATFULL ΤI Methods and devices for sequencing nucleic acids IN Lapidus, Stanley N., Bedford, NH, UNITED STATES PΙ US 2005260609 A1 20051124 AΙ US 2004-852028 A1 20040524 (10) DT Utility FS APPLICATION LREP PROSKAUER ROSE LLP, ONE INTERNATIONAL PLACE 14TH FL, BOSTON, MA, 02110, Number of Claims: 23 CLMN ECL Exemplary Claim: 1 DRWN 6 Drawing Page(s) LN.CNT 788 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ The invention provides methods and devices for high throughput single molecule sequencing of a plurality of target nucleic acids using a universal primer. Devices of the invention comprise a plurality

of oligonucleotides, each having the same sequence, bound to a solid

support, and ligated to a plurality of target nucleic acids.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT. L5 ANSWER 6 OF 28 USPATFULL on STN ΑN 2005:254810 USPATFULL ΤI Modified random primers for probe labeling ΤN Xiang, Charlie, Germantown, MD, UNITED STATES Brownstein, Michael J, Rockville, MD, UNITED STATES PΙ US 2005221304 A1 20051006 ΑТ US 2003-474611 Α1 20020411 (10) WO 2002-US11656 20020411 20031009 PCT 371 date US 2001-283423P PRAI 20010411 (60) DT Utility FS APPLICATION LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988, US CLMN Number of Claims: 33 ECL Exemplary Claim: 1 DRWN 5 Drawing Page(s) LN.CNT 2783 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AR Methods are provided for labeling nucleic acid molecules for use in hybridization reactions, and kits employing these methods. The level of labeling is increased by including one or more reactive modifications, such as amine-modifications, into the primers used to initiate synthesis of the nucleic acid molecule. For instance through random-primed reverse transcription. Also provided are modified random primers (such as amine-modified random primers) useful in these methods, labeling and hybridization kits comprising such primers, labeled nucleic acid molecules and mixtures of molecules, and methods for using them. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 7 OF 28 USPATFULL on STN L5ΑN 2005:240538 USPATFULL Methods for analysis of nucleic acid methylation status and methods for TTfragmentation, labeling and immobilization of nucleic acids Kurn, Nurith, Palo Alto, CA, UNITED STATES ΙN Dafforn, Geoffrey A., Los Altos, CA, UNITED STATES PΤ US 2005208538 A1 20050922 ΑI US 2004-26280 A1 20041229 (11) PRAI US 2003-533381P 20031229 (60) DT Utility FS APPLICATION LREP MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO, CA, 94304-1018, US CLMN Number of Claims: 24 ECL Exemplary Claim: 1 DRWN 1 Drawing Page(s) LN.CNT 3352 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The invention relates to methods for analysis of nucleic acid AB methylation status, and fragmentation and/or labeling and/or immobilization of nucleic acids. More particularly, the invention relates to methods for fragmentation and/or labeling and/or immobilization of nucleic acids comprising labeling and/or cleavage and/or immobilization at abasic sites.

- L5 ANSWER 8 OF 28 USPATFULL on STN
- AN 2005:62950 USPATFULL
- TI Compositions and methods for analysis of nucleic acids
- IN Makarov, Vladimir L., Ann Arbor, MI, UNITED STATES

Langmore, John P., Ann Arbor, MI, UNITED STATES

PI US 2005053986 A1 20050310

AI US 2004-890483 A1 20040713 (10)

RLI Division of Ser. No. US 2001-801346, filed on 6 Mar 2001, GRANTED, Pat. No. US 6762022 Continuation of Ser. No. US 1998-151236, filed on 10 Sep 1998, GRANTED, Pat. No. US 6197557 Continuation-in-part of Ser. No. US 1998-35677, filed on 5 Mar 1998, ABANDONED

DT Utility FS APPLICATION

LREP FULBRIGHT & JAWORSKI L.L.P., 600 CONGRESS AVE., SUITE 2400, AUSTIN, TX, 78701

CLMN Number of Claims: 21

ECL Exemplary Claim: CLM-1-104

DRWN 36 Drawing Page(s)

LN.CNT 5793

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are a number of methods that can be used in a variety of embodiments, including, creation of a nucleic acid terminated at one or more selected bases, sequence analysis of nucleic acids, mapping of sequence motifs within a nucleic acid, positional mapping of nucleic acid clones, and analysis of telomeric regions. The methods utilize double-stranded templates, and in most aspects involve a strand replacement reaction initiated at one or more random or specific locations created in a nucleic acid molecule, and in certain aspects utilizing an oligonucleotide primer.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 28 USPATFULL on STN

AN 2005:62943 USPATFULL

TI Combinatorial nucleobase oligomers comprising universal base analogues and methods for making and using same

IN Livak, Kenneth J., San Jose, CA, UNITED STATES

Mullah, Khairuzzaman Bashar, Union City, CA, UNITED STATES

PI US 2005053979 A1 20050310 AI US 2004-866523 A1 20040610 (10)

PRAI US 2003-478678P 20030612 (60)

DT Utility

FS APPLICATION

LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 275 MIDDLEFIELD ROAD, MENLO PARK, CA, 94025-3506

CLMN Number of Claims: 76 ECL Exemplary Claim: 1 DRWN 11 Drawing Page(s)

LN.CNT 3701

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention relates to insulating combinatorial nucleobase oligomers that comprise universal base analogs, where the oligomers are formed by the ligation of two or more oligomer "blocks" via a covalent linkage. Universal bases may serve to insulate specifically binding nucleobases from the effects of the covalent linker region joining two oligomer blocks together, so that the universal bases at least partially negate the T.sub.m penalty caused by the covalent linkage, effective to reduce the required minimal length of the oligomer blocks and the combinatorial oligomer. The resulting insulating nucleobase combinatorial oligomers find use in any hybridization-based application, including use as probes and primers. The combinatorial oligomers of the present invention provide advantages over existing combinatorial oligomer systems currently known in the art.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 28 USPATFULL on STN

AN 2004:334806 USPATFULL

TI Binary encoded sequence tags INKaufman, Joseph C., Hamden, CT, UNITED STATES Roth, Matthew E., Branford, CT, UNITED STATES Lizardi, Paul M., Wallingford, CT, UNITED STATES Feng, Li, Hamden, CT, UNITED STATES Latimer, Darin R., East Haven, CT, UNITED STATES Horlick, Kenneth R. (U.S. corporation) PΑ PΙ US 2004265888 A1 20041230 ΑI US 2004-872984 Α1 20040621 (10) RLI Continuation of Ser. No. US 2001-994311, filed on 26 Nov 2001, GRANTED, Pat. No. US 6773886 Continuation of Ser. No. US 2000-637751, filed on 11 Aug 2000, GRANTED, Pat. No. US 6383754 Continuation-in-part of Ser. No. US 2000-544713, filed on 6 Apr 2000, GRANTED, Pat. No. US 6261782 US 1999-148870P PRAI 19990813 (60) DT Utility FS APPLICATION LREP NEEDLE & ROSENBERG, P.C., SUITE 1000, 999 PEACHTREE STREET, ATLANTA, GA, 30309-3915 CLMN Number of Claims: 126 ECL Exemplary Claim: 1 DRWN 3 Drawing Page(s) LN.CNT 3697 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ Disclosed is a method for the comprehensive analysis of nucleic acid samples and a detector composition for use in the method. The method, referred to as Binary Encoded Sequence Tags (BEST), involves generation of a set of nucleic acid fragments; adding an adaptor to the ends containing recognition site for cleavage at a site offset from the recognition site; cleaving the fragment to generate fragments having a plurality sticky ends; indexing of the fragments into sets based on the sequence of sticky ends. The fragments are indexed by adding a offset adaptor to newly generated ends. A different adaptor will be coupled to each different sticky end. The resulting fragments--which will have defined ends, be of equal lengths (in preferred embodiment), and a central sequence derived from the source nucleic acid molecule -- are binary sequence tags. The binary sequence tags can be used and further analyzed in numerous ways. For example, the binary sequence tags can be captured by hybridization and coupling, preferably by ligation, to a probe. The probe is preferably immobilized in an array or on sortable beads. One form of the BEST method, referred to as modification assisted analysis of binary sequence tags (MAABST), assesses modification of sequences in nucleic acid molecules by detecting differential cleavage based on the presence or absence of modification in the molecules. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 11 OF 28 USPATFULL on STN L5 ΑN 2003:244266 USPATFULL Methods of manipulating nucleic acids TΙ ΙN Xiang, Charlie, Germantown, MD, UNITED STATES Brownstein, Michael J., Rockville, MD, UNITED STATES PΑ The Gov't of the U.S of America as represented by the Secretary of the Dept. of Health & Human Serv. (U.S. corporation) PΤ US 2003170675 A1 20030911 AΤ US 2002-269515 Α1 20021011 (10) RLI Continuation-in-part of Ser. No. WO 2002-US11656, filed on 11 Apr 2002, PENDING PRAI US 2001-283423P 20010411 (60)

DT Utility
FS APPLICATION

LREP KLARQUIST SPARKMAN, LLP, One World Trade Center, Suite 1600, 121 S.W. Salmon Street, Portland, OR, 97204

CLMN Number of Claims: 57

ECL Exemplary Claim: 1

7 Drawing Page(s) LN.CNT 3279 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB Methods are provided for labeling nucleic acid molecules for use in hybridization reactions, and kits employing these methods. The level of labeling is increased by including one or more reactive modifications, such as amine-modifications, into the primers used to initiate synthesis of the nucleic acid molecule, for instance through random-primed reverse transcription. Also provided are modified random primers (such as amine-modified random primers) useful in these methods, labeling and hybridization kits comprising such primers, labeled nucleic acid molecules and mixtures of molecules, and methods for using them. Methods are also provided for amplifying a nucleic acid template contained within extremely small samples, in some cases as little as one cell. In particular embodiments, a single random primer is used for all steps of the amplification method. The nucleic acid template can either be of cellular or viral origin. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L5 ANSWER 12 OF 28 USPATFULL on STN 2003:120073 USPATFULL ΑN TI Binary encoded sequence tags Kaufman, Joseph C., Hamden, CT, UNITED STATES IN Roth, Matthew E., Branford, CT, UNITED STATES Lizardi, Paul M., Wallingford, CT, UNITED STATES Feng, Li, Hamden, CT, UNITED STATES Latimer, Darin R., East Haven, CT, UNITED STATES PA Yale University (U.S. corporation) PΙ US 2003082556 A1 20030501 US 6773886 B2 20040810 ΑI US 2001-994311 A1 20011126 (9) RLI Continuation of Ser. No. US 2000-637751, filed on 11 Aug 2000, PENDING Continuation-in-part of Ser. No. US 2000-544713, filed on 6 Apr 2000, PATENTED PRAI US 1999-148870P 19990813 (60) DT Utility FS APPLICATION LREP NEEDLE & ROSENBERG, P.C., Suite 1200, The Candler Building, 127 Peachtree Street, N.E., Atlanta, GA, 30303-1811 CLMN Number of Claims: 126 ECL Exemplary Claim: 1 DRWN 3 Drawing Page(s) LN.CNT 3686 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Disclosed is a method for the comprehensive analysis of nucleic acid AΒ samples and a detector composition for use in the method. The method, referred to as Binary Encoded Sequence Tags (BEST), involves generation of a set of nucleic acid fragments; adding an adaptor to the ends containing recognition site for cleavage at a site offset from the recognition site; cleaving the fragment to generate fragments having a plurality sticky ends; indexing of the fragments into sets based on the sequence of sticky ends. The fragments are indexed by adding a offset adaptor to newly generated ends. A different adaptor will be coupled to each different sticky end. The resulting fragments -- which will have defined ends, be of equal lengths (in preferred embodiment), and a

central sequence derived from the source nucleic acid molecule—are binary sequence tags. The binary sequence tags can be used and further analyzed in numerous ways. For example, the binary sequence tags can be captured by hybridization and coupling, preferably by ligation, to a probe. The probe is preferably immobilized in an array or on sortable beads. One form of the BEST method, referred to as modification assisted analysis of binary sequence tags (MAABST), assesses modification of sequences in nucleic acid molecules by detecting differential cleavage

based on the presence or absence of modification in the molecules.

```
ANSWER 13 OF 28 USPATFULL on STN
L5
ΑN
       2003:78476 USPATFULL
TΙ
       Enzymatic light amplification
IN
       Weiner, Michael P., Guilford, CT, UNITED STATES
PΤ
       US 2003054396
                            A1
                                20030320
       US 2002-236871
ΑT
                                20020906 (10)
                            Α1
       US 2001-318218P
PRAI
                            20010907 (60)
       US 2001-335950P
                            20011030 (60)
DT
       Utility
FS
       APPLICATION
LREP
       MINTZ, LEVIN, COHN, FERRIS, GLOVSKY, AND POPEO, P.C., ONE FINANCIAL
       CENTER, BOSTON, MA, 02111
CLMN
       Number of Claims: 73
ECL
       Exemplary Claim: 1
DRWN
       9 Drawing Page(s)
LN.CNT 3252
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Reversibly labeled nucleotides and methods involving the nucleotides are disclosed. The methods included methods of determining a sequence of a
AB
       nucleic acid.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 14 OF 28 USPATFULL on STN
ΑN
       2003:23647 USPATFULL
ΤI
       Method for detecting single nucleotide polymorphisms (SNP'S) and point
       mutations
IN
       Xue, Hong, New Territories, HONG KONG
       Wong, Jeffrey Tze-Fei, Mid-Levels, HONG KONG
PA
       PharmacoGenetics, Ltd., Clear Water Bay, HONG KONG (non-U.S.
       corporation)
ΡI
       US 2003017487
                            A1
                                20030123
       US 6972174
                            B2
                                20051206
AΙ
       US 2002-162530
                            A1 20020604 (10)
       Continuation-in-part of Ser. No. US 2001-876727, filed on 6 Jun 2001,
RLI
       PENDING
DT
       Utility
FS
       APPLICATION
       T. Ling Chwang, Suite 600, 2435 N. Central Expressway, Richardson, TX,
LREP
       75080
CLMN
       Number of Claims: 83
ECL
       Exemplary Claim: 1
DRWN
       12 Drawing Page(s)
LN.CNT 1562
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method of genotyping single nucleotide polymorphisms ("SNP") and point
       mutations in nucleic acid based on chain extension by polymerase. This
       invention is based on the fact that the nucleoside immediately 5'
       adjacent to any SNP/point mutation site is known, and the neighboring
       sequence immediately 3' adjacent to the site is also known. A primer
       complementary to the sequence directly adjacent to the SNP on the 3'
       side in a target polynucleotide is used for chain elongation. The
       polymerase reaction mixture contains one chain-terminating nucleotide
       having a base complementary to the nucleotide directly adjacent to the
       SNP on the 5' side in the target polynucleotide. An additional dNTP may
       be added to produce a primer with the maximum of a two-base extension.
       The resultant elongation/termination reaction products are analyzed for
       the length of chain extension of the primer, or for the amount of label
       incorporation from a labeled form of the terminator nucleotide.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 15 OF 28 USPATFULL on STN AN 2003:17365 USPATFULL Multiplexed differential displacement for nucleic acid determinations TI ΙN Singh, Sharat, San Jose, CA, UNITED STATES Inamdar, Anita, Sunnyvale, CA, UNITED STATES Ullman, Edwin F., Atherton, CA, UNITED STATES Cao, Liching, Vallejo, CA, UNITED STATES Albagli, David, Millbrae, CA, UNITED STATES PΑ ACLARA BioSciences, Inc. (U.S. corporation) PΙ US 2003013117 A1 20030116 ΑI US 2002-245030 A1 20020916 (10) RLI Continuation of Ser. No. US 2000-684590, filed on 5 Oct 2000, PENDING Continuation-in-part of Ser. No. US 2000-609279, filed on 30 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-354629, filed on 16 Jul 1999, PENDING DT Utility FS APPLICATION PERKINS COIE LLP, P.O. BOX 2168, MENLO PARK, CA, 94026 LREP CLMN Number of Claims: 48 Exemplary Claim: 1 ECL DRWN 2 Drawing Page(s) LN.CNT 1498 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Multiplexed determinations of large numbers of events are achieved in an accurate and simple manner by using a multitude of primer reagents in combination with different capture reagents that serve for sequestering all the reagents at a single site, followed by independent release of subsets of the primer reagents using differential release conditions. Also included as part of the primer reagents may be identifiers, which serve to identify a particular characteristic. The method is illustrated using primers with sequences for initiation of chain extension that are joined to or serve as a capture sequence, and where the extended primer has an identifier. After extending the primer, the extended primers are sequestered via the capture sequence onto a sequestering agent, sequentially released and the released extended primers analyzed to provide multiplexed determinations. The subject method finds application for nucleic acid sequencing, single nucleotide polymorphism determinations, identification of nucleic acid fragments, and the like. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 16 OF 28 USPATFULL on STN L5 ΑN 2002:235372 USPATFULL ΤI Assay for genetic polymorphisms using scattered light detectable labels ΙN Bee, Gary, Vista, CA, UNITED STATES Kohne, David E., La Jolla, CA, UNITED STATES Korb, Linda, San Diego, CA, UNITED STATES Peterson, Todd, Coronado, CA, UNITED STATES Yguerabide, Juan, La Jolla, CA, UNITED STATES PΙ US 2002127561 A1 20020912 ΑI US 2001-880732 20010612 (9) Α1 PRAI US 2000-210988P 20000612 (60) DTUtility FS APPLICATION Wesley B. Ames, FOLEY & LARDNER, 23rd Floor, 402 West Broadway, San LREP Diego, CA, 92101-3542 Number of Claims: 58 CLMN ECL Exemplary Claim: 1 8 Drawing Page(s) DRWN LN.CNT 2494

Described are methods for determining the presence or absence of

particular polymorphisms in CYP2D6 and other genes using scattered light detectable particles as detectable labels, and compositions useful in such methods.

# CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 17 OF 28 USPATFULL on STN
       2002:198549 USPATFULL
ΑN
TΙ
       Fixed address analysis of sequence tags
       Lizardi, Paul M., Wallingford, CT, UNITED STATES
IN
       Roth, Matthew E., Branford, CT, UNITED STATES
       Feng, Li, Hamden, CT, UNITED STATES
       Guerra, Cesar E., Guilford, CT, UNITED STATES
       Weber, Shane C., Woodbridge, CT, UNITED STATES Kaufman, Joseph C., Hamden, CT, UNITED STATES
       Latimer, Darin R., East Haven, CT, UNITED STATES
PA
       Yale University (U.S. corporation)
PΙ
       US 2002106649
                            A1 20020808
       US 6677121
                            В2
                                 20040113
ΑI
       US 2001-855793
                            A1 20010515 (9)
       Continuation of Ser. No. US 2000-544713, filed on 6 Apr 2000, PATENTED
RLI
PRAI
       US 1999-127932P
                            19990406 (60)
DΤ
       Utility
FS
       APPLICATION
       Robert A. Hodges, NEEDLE & ROSENBERG, P.C., The Candler Building, Suite
LREP
       1200, 127 Peachtree Street, N.E., Atlanta, GA, 30303-1811
CLMN
       Number of Claims: 154
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Page(s)
LN.CNT 4340
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

Disclosed is a method for the comprehensive analysis of nucleic acid samples and a detector composition for use in the method. The method, referred to as Fixed Address Analysis of Sequence Tags (FAAST), involves generation of a set of nucleic acid fragments having a variety of sticky end sequences; indexing of the fragments into sets based on the sequence of sticky ends; associating a detector sequence with the fragments; sequence-based capture of the indexed fragments on a detector array; and detection of the fragment labels. Generation of the multiple sticky end sequences is accomplished by incubating the nucleic acid sample with one or more nucleic acid cleaving reagents. The indexed fragments are captured by hybridization and coupling, preferably by ligation, to a probe. The method allows a complex sample of nucleic acid to be quickly and easily cataloged in a reproducible and sequence-specific manner. One form of the method allows determination of associations, in a nucleic acid molecule, of different combinations of known or potential sequences. Another form of the method assesses modification of sequences in nucleic acid molecules by basing cleavage of the molecules on the presence or absence of modification.

```
L_5
     ANSWER 18 OF 28 USPATFULL on STN
ΑN
       2002:102268 USPATFULL
TI
       Binary encoded sequence tags
IN
       Kaufman, Joseph C., Hamden, CT, United States
       Roth, Matthew E., Branford, CT, United States
       Lizardi, Paul M., Wallingford, CT, United States
       Feng, Li, Hamden, CT, United States
       Latimer, Darin R., East Haven, CT, United States
PΑ
       Yale University, United States (U.S. corporation)
       Agilix Corporation, United States (U.S. corporation)
PΙ
       US 6383754
                           B1 20020507
       US 2000-637751
ΑI
                               20000811 (9)
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RLI Continuation-in-part of Ser. No. US 2000-544713, filed on 6 Apr 2000, now patented, Pat. No. US 6261782 PRAI US 1999-148870P 19990813 (60) DΤ Utility FS GRANTED EXNAM Primary Examiner: Horlick, Kenneth R. LREP Needle & Rosenberg, P.C. CLMN Number of Claims: 131 ECL Exemplary Claim: 1 DRWN 3 Drawing Figure(s); 3 Drawing Page(s) LN.CNT 3871 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB Disclosed is a method for the comprehensive analysis of nucleic acid samples and a detector composition for use in the method. The method, referred to as Binary Encoded Sequence Tags (BEST), involves generation of a set of nucleic acid fragments; adding an adaptor to the ends containing recognition site for cleavage at a site offset from the recognition site; cleaving the fragment to generate fragments having a plurality sticky ends; indexing of the fragments into sets based on the sequence of sticky ends. The fragments are indexed by adding a offset adaptor to newly generated ends. A different adaptor will be coupled to each different sticky end. The resulting fragments--which will have defined ends, be of equal lengths (in preferred embodiment), and a central sequence derived from the source nucleic acid molecule--are binary sequence tags. The binary sequence tags can be used and further analyzed in numerous ways. For example, the binary sequence tags can be captured by hybridization and coupling, preferably by ligation, to a probe. The probe is preferably immobilized in an array or on sortable beads. One form of the BEST method, referred to as modification assisted analysis of binary sequence tags (MAABST), assesses modification of sequences in nucleic acid molecules by detecting differential cleavage based on the presence or absence of modification in the molecules. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L5 ANSWER 19 OF 28 USPATFULL on STN ΑN 2002:85142 USPATFULL TI Multiplexed differential displacement for nucleic acid determinations ΙN Singh, Sharat, San Jose, CA, UNITED STATES Inamdar, Anita, Sunnyvale, CA, UNITED STATES Ullman, Edwin F., Atherton, CA, UNITED STATES Cao, Liching, Vallejo, CA, UNITED STATES Albagli, David, Millbrae, CA, UNITED STATES PA Lynx Therapeutics, Inc. (U.S. corporation)

PΙ US 2002045182 A1 20020418 AΙ US 2001-929333 A1 20010813 (9) Division of Ser. No. US 2000-684590, filed on 5 Oct 2000, PENDING RLI Continuation-in-part of Ser. No. US 2000-609279, filed on 30 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-354629, filed on 16 Jul 1999, PENDING DTUtility FS APPLICATION LREP PERKINS COIE LLP, P.O. BOX 2168, MENLO PARK, CA, 94026 Number of Claims: 48 ECL Exemplary Claim: 1 DRWN 2 Drawing Page(s) LN.CNT 1497 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Multiplexed determinations of large numbers of events are achieved in an AΒ accurate and simple manner by using a multitude of primer reagents in

combination with different capture reagents that serve for sequestering all the reagents at a single site, followed by independent release of subsets of the primer reagents using differential release conditions. Also included as part of the primer reagents may be identifiers, which

serve to identify a particular characteristic. The method is illustrated using primers with sequences for initiation of chain extension that are joined to or serve as a capture sequence, and where the extended primer has an identifier. After extending the primer, the extended primers are sequestered via the capture sequence onto a sequestering agent, sequentially released and the released extended primers analyzed to provide multiplexed determinations. The subject method finds application for nucleic acid sequencing, single nucleotide polymorphism determinations, identification of nucleic acid fragments, and the like.

# CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 20 OF 28 USPATFULL on STN
L5
       2002:78405 USPATFULL
ΑN
TI
       Compositions and methods for analysis of nucleic acids
ΙN
       Makarov, Vladimir L., Ann Arbor, MI, UNITED STATES
       Langmore, John P., Ann Arbor, MI, UNITED STATES
PΑ
       The Regents of the University of Michigan (U.S. corporation)
PI
       US 2002042059
                           A1 20020411
       US 6762022
                           В2
                               20040713
       US 2001-801346
ΑI
                           A1
                              20010306 (9)
       Continuation of Ser. No. US 1998-151236, filed on 10 Sep 1998, GRANTED,
RLT
       Pat. No. US 6197557 Continuation-in-part of Ser. No. US 1998-35677,
       filed on 5 Mar 1998, ABANDONED Continuation-in-part of Ser. No. US
       1997-811804, filed on 6 Mar 1997, GRANTED, Pat. No. US 6117634
DT
       Utility
FS
       APPLICATION
LREP
       David L. Parker, FULBRIGHT & JAWORSKI L.L.P., 600 Congress Avenue, Suite
       2400, Austin, TX, 78701
CLMN
       Number of Claims: 104
ECL
       Exemplary Claim: 1
DRWN
       38 Drawing Page(s)
LN.CNT 6552
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AR
       Disclosed are a number of methods that can be used in a variety of
       embodiments, including, creation of a nucleic acid terminated at one or
       more selected bases, sequence analysis of nucleic acids, mapping of
       sequence motifs within a nucleic acid, positional mapping of nucleic
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acid clones, and analysis of telomeric regions. The methods utilize double-stranded templates, and in most aspects involve a strand replacement reaction initiated at one or more random or specific locations created in a nucleic acid molecule, and in certain aspects

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

utilizing an oligonucleotide primer.

```
ANSWER 21 OF 28 USPATFULL on STN
L5
ΑN
       2001:112050 USPATFULL
TΙ
       Fixed address analysis of sequence tags
ΙN
       Lizardi, Paul M., Wallingford, CT, United States
       Roth, Matthew E., Branford, CT, United States
       Feng, Li, Hamden, CT, United States
       Guerra, Cesar E., Guilford, CT, United States
       Weber, Shane C., Woodbridge, CT, United States
       Kaufman, Joseph C., Hamden, CT, United States
       Latimer, Darin R., East Haven, CT, United States
PA
       Yale University, New Haven, CT, United States (U.S. corporation)
PΙ
       US 6261782
                           В1
                               20010717
ΑI
       US 2000-544713
                               20000406 (9)
PRAI
       US 1999-127932P
                          19990406 (60)
DT
       Utility
FS
       GRANTED
EXNAM
      Primary Examiner: Horlick, Kenneth R.
LREP
       Needle & Rosenberg, P.C.
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CLMN Number of Claims: 154
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 4505

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AΒ Disclosed is a method for the comprehensive analysis of nucleic acid samples and a detector composition for use in the method. The method, referred to as Fixed Address Analysis of Sequence Tags (FAAST), involves generation of a set of nucleic acid fragments having a variety of sticky end sequences; indexing of the fragments into sets based on the sequence of sticky ends; associating a detector sequence with the fragments; sequence-based capture of the indexed fragments on a detector array; and detection of the fragment labels. Generation of the multiple sticky end sequences is accomplished by incubating the nucleic acid sample with one or more nucleic acid cleaving reagents. The indexed fragments are captured by hybridization and coupling, preferably by ligation, to a probe. The method allows a complex sample of nucleic acid to be quickly and easily cataloged in a reproducible and sequence-specific manner. One form of the method allows determination of associations, in a nucleic acid molecule, of different combinations of known or potential sequences. Another form of the method assesses modification of sequences in nucleic acid molecules by basing cleavage of the molecules on the presence or absence of modification.

# CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 22 OF 28 USPATFULL on STN

AN 2001:33054 USPATFULL

TI Compositions and methods for analysis of nucleic acids

IN Makarov, Vladimir L., Ann Arbor, MI, United States Langmore, John P., Ann Arbor, MI, United States

PA The Regents of the University of Michigan, Ann Arbor, MI, United States

(U.S. corporation)

PI US 6197557 B1 20010306

AI US 1998-151236 19980910 (9)

Continuation-in-part of Ser. No. US 1998-35677, filed on 5 Mar 1998, now abandoned Continuation-in-part of Ser. No. US 1997-811804, filed on 6 Mar 1997, now patented, Pat. No. US 6117634

DT Utility FS Granted

EXNAM Primary Examiner: Brusca, John S.; Assistant Examiner: Kim, Young

LREP Fulbright & Jaworski, LLP

CLMN Number of Claims: 46 ECL Exemplary Claim: 1

DRWN 67 Drawing Figure(s); 38 Drawing Page(s)

LN.CNT 5768

ΙN

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are a number of methods that can be used in a variety of embodiments, including, creation of a nucleic acid terminated at one or more selected bases, sequence analysis of nucleic acids, mapping of sequence motifs within a nucleic acid, positional mapping of nucleic acid clones, and analysis of telomeric regions. The methods utilize double-stranded templates, and in most aspects involve a strand replacement reaction initiated at one or more random or specific locations created in a nucleic acid molecule, and in certain aspects utilizing an oligonucleotide primer.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 23 OF 28 USPATFULL on STN

AN 2000:128125 USPATFULL

TI Nucleic acid amplification using single primer

Rose, Samuel, Mountain View, CA, United States Goodman, Thomas C., Mountain View, CA, United States Western, Linda M., Mountain View, CA, United States Becker, Martin, Palo Alto, CA, United States Ullman, Edwin F., Atherton, CA, United States

PA Behringwerke AG, Marburg, Germany, Federal Republic of (non-U.S.

corporation) US 6124090

20000926

AI US 1995-438149

49 19950509 (8)

Division of Ser. No. US 1994-242931, filed on 16 May 1994 which is a continuation of Ser. No. US 1993-109852, filed on 20 Aug 1993, now abandoned which is a continuation of Ser. No. US 1991-734030, filed on 22 Jul 1991, now abandoned which is a continuation of Ser. No. US 1989-399795, filed on 29 Aug 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-299282, filed on 19 Jan 1989, now abandoned which is a division of Ser. No. US 1994-194140, filed on 9 Feb 1994, now patented, Pat. No. US 5508178 which is a continuation of Ser. No. US 1992-892412, filed on 1 Jun 1992, now abandoned which is a continuation of Ser. No. US 1989-299282, filed on 19 Jan 1989, now abandoned

DT Utility FS Granted

PΙ

FS Granted
EXNAM Primary Examiner: Zitomer, Stephanie W.; Assistant Examiner: Whisenant,

LREP Leitereg, Theodore J. CLMN Number of Claims: 65 ECL Exemplary Claim: 1

DRWN 3 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 2173

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A method is disclosed for determining the presence of a polynucleotide AΒ analyte in a sample suspected of containing the analyte. The method comprises (a) forming as a result of the presence of an analyte a single stranded polynucleotide comprising a target polynucleotide binding sequence flanked by first and second polynucleotide sequences that differ from the sequence of the analyte or a sequence complementary to the analyte sequence, (b) forming multiple copies of the single stranded polynucleotide, and (c) detecting the single stranded polynucleotide. Also disclosed is a method of producing at least one copy of a single stranded polynucleotide. The method comprises (a) forming in the presence of nucleoside triphosphates and template dependent polynucleotide polymerase an extension of a polynucleotide primer at least the 3'-end of which has at least a 10 base sequence hybridizable with a second sequence flanking the 3'-end of the single stranded polynucleotide, the second sequence being partially or fully complementary with at least a 10 base first sequence flanking the 5' end of the single stranded polynucleotide, (b) dissociating the extended polynucleotide primer and the single stranded polynucleotide, (c) repeating step a and (d) dissociating the extended polynucleotide primer and the copy of the single stranded polynucleotide.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L5 ANSWER 24 OF 28 USPATFULL on STN
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AN 1998:131529 USPATFULL

TI Kits for nucleic acid amplification kit using single primer

IN Rose, Samuel, Mountain View, CA, United States
Goodman, Thomas C., Mountain View, CA, United States
Western, Linda M., Mountain View, CA, United States
Becker, Martin, Palo Alto, CA, United States
Ullman, Edwin F., Atherton, CA, United States

PA Behring Diagnostics GmbH, Deerfield, IL, United States (U.S. corporation)

PI US 5827649 19981027 AI US 1994-242931 19940516 (8)

RLI Continuation of Ser. No. US 1993-109852, filed on 20 Aug 1993, now

abandoned which is a continuation of Ser. No. US 1991-734030, filed on 22 Jul 1991, now abandoned which is a continuation of Ser. No. US 1989-399795, filed on 29 Aug 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-299282, filed on 19 Jan 1989, now abandoned

DT Utility FS Granted

EXNAM Primary Examiner: Marschel, Ardin H.

LREP Leitereg, Theodore J.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1

DRWN 8 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 1889

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is disclosed for determining the presence of a polynucleotide analyte in a sample suspected of containing the analyte. The method comprises (a) forming as a result of the presence of an analyte a single stranded polynucleotide comprising a target polynucleotide binding sequence flanked by first and second polynucleotide sequences that differ from the sequence of the analyte or a sequence complementary to the analyte sequence, (b) forming multiple copies of the single stranded polynucleotide, and (c) detecting the single stranded polynucleotide. Also disclosed is a method of producing at least one copy of a single stranded polynucleotide. The method comprises (a) forming in the presence of nucleoside triphosphates and template dependent polynucleotide polymerase an extension of a polynucleotide primer at least the 3'-end of which has at least a 10 base sequence hybridizable with a second sequence flanking the 3'-end of the single stranded polynucleotide, the second sequence being partially or fully complementary with at least a 10 base first sequence flanking the 5' end of the single stranded polynucleotide, (b) dissociating the extended polynucleotide primer and the single stranded polynucleotide, (c) repeating step a and (d) dissociating the extended polynucleotide primer and the copy of the single stranded polynucleotide.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 25 OF 28 USPATFULL on STN

AN 97:22643 USPATFULL

TI Method for producing a polynucleotide for use in single primer amplification

IN Western, Linda M., San Mateo, CA, United States Hahnenberger, Karen M., Cupertino, CA, United States Rose, Samuel, Mountain View, CA, United States Becker, Martin, Palo Alto, CA, United States Ullman, Edwin F., Atherton, CA, United States

PA Behringwerke AG, Marburg, Germany, Federal Republic of (non-U.S.

corporation)
PI US 5612199 19970318

AI US 1994-221662 19940401 (8)

RLI Continuation of Ser. No. US 1991-776538, filed on 11 Oct 1991, now abandoned

DT Utility FS Granted

EXNAM Primary Examiner: Zitomer, Stephanie W.

LREP Leitereg, Theodore J.
CLMN Number of Claims: 46
ECL Exemplary Claim: 2

DRWN 8 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 1936

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is disclosed for extending an extender probe to produce a single stranded polydeoxynucleotide that is free of unreacted extender probe and has two segments that are non-contiguous and complementary

with each other. The method comprises the steps of (1) providing in combination (a) a polynucleotide having two non-contiguous, non-complementary nucleotide sequences S1 and S2 wherein S2 is 5' of S1 and is at least ten deoxynucleotides long, (b) an extender probe comprised of two deoxynucleotide sequences, wherein the sequence at the 3'-end of the extender probe (EP1) is hybridizable with S1 and the other of the deoxynucleotide sequences (EP2) is substantially identical to S2 and (c) means for modifying the 3'-end of extender probe that does not hybridize with the polynucleotide and (2) extending the extender probe along the polynucleotide wherein extender probe not hybridized to the polynucleotide becomes modified at its 3'-end.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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ANSWER 26 OF 28 USPATFULL on STN
L5
AN
       97:5872 USPATFULL
ΤI
       Method for producing a polynucleotide for use in single primer
       amplification
IN
       Rose, Samuel, Mountain View, CA, United States
       Western, Linda M., Mountain View, CA, United States
       Becker, Martin, Palo Alto, CA, United States
       Ullman, Edwin F., Atherton, CA, United States
PA
       Behringwerke AG, Marburg, Germany, Federal Republic of (non-U.S.
       corporation)
PΙ
       US 5595891
                               19970121
ΑI
       US 1990-555323
                               19900719 (7)
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Zitomer, Stephanie W.
LREP
       Leitereg, Theodore J.
       Number of Claims: 49
CLMN
ECL
       Exemplary Claim: 1
DRWN
       3 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1793
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method is disclosed for producing a single stranded
```

polydeoxynucleotide having two segments that are non-contiguous and complementary with each other. The method comprises the steps of providing in combination (1) a polynucleotide having two non-contiguous, non-complementary nucleotide sequences S1 and S2 wherein S2 is 5' of S1 and is at least ten deoxynucleotides long and (2) an extender probe comprised of two deoxynucleotide sequences, wherein the sequence at the 3'-end of the extender probe is hybridizable with S1 and the other of the deoxynucleotide sequences is homologous to S2 and (b) extending the extender probe along the polynucleotide. The method can also comprise providing in the combination a polydoxynucleotide primer capable of hybridizing at least at its 3'-end with a nucleotide sequence complementary to S2 under conditions where (1) the extended extender probe is rendered single stranded, (2) the polydeoxynucleotide primer hybridizes with and is extended along the extended extender probe to form a duplex comprising extended primer, (3) the extended primer is dissociated from the duplex, and (4) the primer hybridizes with and is extended along the extended primer to form a duplex comprising extended primer, and repeating steps (3) and (4). The method finds particular application in the detection of polynucleotide analytes.

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L5 ANSWER 27 OF 28 USPATFULL on STN
AN 96:31728 USPATFULL
TI Nucleic acid amplification using single primer
Rose, Samuel, 3401 Hillview Ave., P.O. Box 10850, Palo Alto, CA, United States 94303
Goodman, Thomas C., 3401 Hillview Ave., P.O. Box 10850, Palo Alto, CA,
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United States 94303 Western, Linda M., 3401 Hillview Ave., P.O. Box 10850, Palo Alto, CA, United States 94303 Becker, Martin, 3401 Hillview Ave., P.O. Box 10850, Palo Alto, CA, United States 94303 Ullman, Edwin F., 3401 Hillview Ave., P.O. Box 10850, Palo Alto, CA, United States 94303 PΙ US 5508178 19960416 ΑI US 1994-194140 19940209 (8) RLI Continuation of Ser. No. US 1992-892412, filed on 1 Jun 1992, now abandoned which is a continuation of Ser. No. US 1989-299282, filed on 19 Jan 1989, now abandoned DTUtility FS Granted Primary Examiner: Jones, W. Gary; Assistant Examiner: Marschel, Ardin H. EXNAM LREP Leitereg, Theodore J. CLMN Number of Claims: 25 ECL Exemplary Claim: 1 DRWN 6 Drawing Figure(s); 4 Drawing Page(s) LN.CNT 1860 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ A method is disclosed for determining the presence of a polynucleotide analyte in a sample suspected of containing the analyte. The method comprises (a) forming as a result of the presence of an analyte a single stranded polynucleotide comprising a target polynucleotide binding sequence flanked by first and second polynucleotide sequences that differ from the sequence of the analyte or a sequence complementary to the analyte sequence, (b) forming multiple copies of the single stranded polynucleotide, and (c) detecting the single stranded polynucleotide. Also disclosed is a method of producing at least one copy of a single stranded polynucleotide. The method comprises (a) forming in the presence of nucleoside triphosphates and template dependent

polynucleotide polymerase an extension of a polynucleotide primer at least the 3'-end of which has at least a 10 base sequence hybridizable with a second sequence flanking the 3'-end of the single stranded polynucleotide, the second sequence being partially or fully

complementary with at least a 10 base first sequence flanking the 5' end of the single stranded polynucleotide, (b) dissociating the extended polynucleotide primer and the single stranded polynucleotide, (c)

repeating step a and (d) dissociating the extended polynucleotide primer

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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ANSWER 28 OF 28 USPATFULL on STN
L5
ΑN
       95:71247 USPATFULL
TI
      Method for producing a polynucleotide having an intramolecularly
       base-paired structure
       Rose, Samuel, Mountain View, CA, United States
ΙN
       Western, Linda M., Mountain View, CA, United States
PA
       Syntex (U.S.A.) Inc., Palo Alto, CA, United States (U.S. corporation)
PΙ
       US 5439793
                               19950808
       US 1990-555968
ΑI
                               19900719 (7)
DΤ
       Utility
      Primary Examiner: Zitomer, Stephanie W.
EXNAM
       Leitereg, Theodore J.
CLMN
       Number of Claims: 49
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2156
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
      A method is disclosed for forming a single stranded polynucleotide
AΒ
       having two segments that are non-contiguous and hybridizable with each
```

and the copy of the single stranded polynucleotide.

other. The method comprises the step of providing in combination (1) a first polynucleotide sequence having a hydroxyl at its 3'-end, (2) a second polynucleotide sequence having a hydroxyl or phosphate group at its 5'-end, and (3) a ligase, wherein at least ten consecutive bases of one of the sequences can hybridize to the other of the sequences to form a duplex. The duplex is comprised of a non-hybridized single stranded portion of one of the polynucleotide sequences containing one of the ends and at least five bases. The combination is provided under conditions for forming the duplex and ligating the ends within the duplex. The method finds particular application in the detection of polynucleotide analytes.